

One of the specimens is a male with the penis exerted, which is of quite different form from that of *L. perocellata*. The penis is ovate, lobed and hooked on the edge, folded together, ending in a broad, oblong, triangular hard claw, with a groove on its underside; the two sides of the expansion are folded, but not exactly in half, so that the fold is on one side of the terminal claw. There is a distinct groove at the base, with raised edges, which fork off to each side a little above the base, and which again fork off on each of its sides just above their base; and on the end of one side of each groove are a couple of small, more or less hard, curved hooks. The end of the tail is tapering, acute, and hard.

XXIII.—*On the Deer of the West Coast of South America, with the Description of a new Species from Peru (Cervus Whitelyi)*. By Dr. J. E. GRAY, F.R.S. &c.

MR. WHITELEY, Junior, has sent to the British Museum from the mountains of Peru the skull of an adult female, and the skull of a young smaller deer from the valley of Cosnipata, which, from its having rudimentary canine teeth, is perhaps that of a male. The skins belonging to these skulls were destroyed in the journey from the Indian country to Cuzco, he having been caught in the rain.

These skulls, and the other skulls of deer from the west coast of America, distinctly show that there are four deer, besides the Pudu (*Cervus chilensis*), which inhabit the Cordilleras from Patagonia to Peru, specimens of the skulls of which are all in the British Museum—and most distinct from each other, differing in the general form, size, and depth of the preorbital pit, and in the form and size of the intermaxillary bone.

It is to be observed that the two skulls of the adult female *Xenelaphus* in the Museum have well-developed, very slender, rudimentary canines; so that the existence of canines is not a certain mark that the skulls belong to the male sex. Canine teeth are observed in the two sexes of *Xenelaphus*, and in the skull of *Cervus Whitelyi*; I see no indication of the canine teeth in the skulls of the male or female *Huamela leucotis* or in those of *Furcifer antisiensis* in the British Museum.

The Peruvian Roebucks may be thus defined:—

1. *Xenelaphus chilensis*.

On recomparing the skull of the female from the Andes
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with M. Gay's figure of the skull of the animal on which he established *Cervus chilensis*, I have confirmed my former opinion expressed in the 'Annals,' 1873, xi. p. 309, and have very little doubt that it was described from a very young specimen of this species. The figure exhibits the triangular preorbital pit peculiar to the species, though it does not appear so deep as in our specimens; and the conical prominences on the sides of the forehead, which are found in the two skulls of this species in the British Museum, are well represented. Both the adult skulls have the hole on the side of the lower jaw in the centre of the diastema; but in M. Gay's figure of the young skull it is much nearer the front end of the jaw. The skulls of the males and females have small, slender canine teeth.

The very young animal figured by M. Gay is darker than those brought by Mr. Whitely, and appears to be in its summer coat. One of Mr. Whitely's specimens, which appears to be changing its fur, has some patches of hair of this dark colour.

It is quite clear that, even if the horns of the male brought home by Mr. Whitely are not of the normal form, they must be quite different from those of the much larger *Huamela leucotis* from Magellan's Straits.

As M. Gay's specimen was first described, I adopt his specific name, and thus avoid the inconvenience that might result should the horns I have described prove to be malformations and not the usual horns of the species, although I lay myself open to the objection of the purist that I use the name *chilensis* for a Peruvian species.

Huamela leucotis from Magellan's Straits is at once known from this species by its very much larger size: the animal belongs to a larger type; and the horns are peculiar. The skull of *Huamela* has the large, very deep, subtriangular tearpit of *Xenelaphus*; the upper outer edge of the orbit is thickened and produced behind into a conical prominence on the side of the forehead, somewhat as in *Xenelaphus*, but in a much greater degree; and the intermaxillary bones are broad behind, and reach up to the nasals. The skulls of the males and females are destitute of canine teeth.

2. *Furcifer antisiensis*.

The skull of the female, which has been received from Mr. Whitely, is very like the skull in the British Museum received from the Zoological Society's museum under the name of *Cervus antisiensis*, a species that is only known from a figure of the animal by M. d'Orbigny, the skull of which has not been described or figured.

The skull of this species differs from that of *Xenelaphus chilensis* in having a small, shallow, triangular pit in front of the orbit, and in the intermaxillary being narrowed above and not reaching quite so high as the nasal bones.

The skull of the female has no prominence on the side of the head behind the orbit, as in the two preceding species. The skull of the male, from the Society, has only rudimentary anomalous horns, that of the right side being forked, and of the left simple; it is therefore impossible to compare them with the figure of the horns given by D'Orbigny. The front of the upper jaw between the intermaxillary bones is much larger in the male than in the female; the front edge of the intermaxillary bone in the male is bifid, rugose on the underside. The forehead between the eyes and horns in both the male and female skulls is strongly keeled, the keel being highest in the male.

The reception of this skull from Peru proves that Dr. Philippi was wrong, and probably misled by believing that there was only one species of deer on the Andes instead of four, when he observed (in Wiegmann's 'Archiv,' 1870) that D'Orbigny's *Cervus antisiensis* was the same as Gay's *Cervus chilensis*; or at least this skull proves that there is another species found in the Peruvian Andes distinct from Gay's *Cervus chilensis*.

Cervus (—?) *Whitelyi*, n. sp.

It is impossible to refer this skull from the valley of Cosnipata to any of the modern genera, as it is quite destitute of any appearance of horns. It is the skull of a rather young animal, with only five grinders on each side, which yet appear to be fully formed, and is unlike the skull of any South-American deer in the Museum collection, the brain-cavity being much larger and more ventricose compared with the compressed face than in any other known skull; and it has rudimentary canines, which are not to be observed in any species of *Coassus* or smaller South-American deer.

The skull is $6\frac{3}{4}$ inches long, and $3\frac{1}{2}$ inches wide in the lower edge of the middle of the orbital opening (which is the widest part of the skull), and $3\frac{5}{8}$ inches from the end of the occiput to the front of the orbit, and $3\frac{1}{8}$ inches from the front of the orbit to the end of the intermaxillaries. There is a rather elongate groove over each orbit, as in the skull of *Coassus nemorivagus*; but the brain-case of this skull is very much narrower, and has a keel in the centre of the forehead, which is entirely absent in the flat broad forehead of *Cervus Whitelyi*. There is a moderately deep, concave, rounded pit for the tear-gland, and

two perforations for the passage of vessels through the orbit, just behind the lachrymal pit. The brain-case is oblong, narrowed above, at the upper edge of the orbits. At the lower edge of the orbits it is much expanded out, being the widest part of the skull. The face, from the upper edge of the orbits is gradually, and from the lower edge rapidly, attenuated as far as the front end of the grinders. The nose, from the front end of the grinders, slender, compressed, with the front half of its length rather narrowed on the sides. The nasal bones moderate, the middle of the hinder end being broadly produced between the fore part of the frontals, which I have not observed in any other deer. The intermaxillary bones very slender in front, the hinder half becoming much broader above, and attached to the sides of the front of the nasals—more so than in any South-American deer that I have yet observed.

PROCEEDINGS OF LEARNED SOCIETIES.

ROYAL SOCIETY.

Feb. 6, 1873.—Sir George Biddell Airy, K.C.B., President, in the Chair.

“On the Osteology of the *Hypotamida*.”

By Dr. W. KOWALEVSKY.

The paper laid before the Society is intended to fill a certain deficiency in our knowledge of the extinct creation by giving a complete osteology of a family of Paridigitate Ungulata, which, by the completeness of its skeleton, unreduced number of digits, and rich development in generic and specific forms, I deem to be of great importance in our speculations on the pedigree of living Ungulata Paridigitata.

On theoretical grounds, as well as from the consideration of rudimentary parts in living Paridigitata, anatomists have always supposed that fossil representatives of this family, which could be regarded as the progenitors of the recent Paridigitata, would certainly exhibit a much less reduced skeleton and a more complete number of digits than the recent genera do. Yet, strange to say, such complete forms were not forthcoming; and if assumed on the evidence of their teeth, very little was known about the structure of their bony frame. My statement will sound like an exaggeration; but still it is true, that since the time of Cuvier, who shortly noticed the tetradactyle *Dichobune*, and Blainville, who gave a very imperfect description of *Cainotherium*, we have absolutely